



## INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior  
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)  
Exp. Date (11/30/2010)  
Form No. (10-226)

<b>Reporting Year:</b> 2007	<b>Park:</b> Shenandoah NP	<b>Select the type of permit this report addresses:</b> Scientific Study	
<b>Name of principal investigator or responsible official:</b> Christopher Bailey		<b>Office Phone:</b> 757-221-2445	
<b>Mailing address:</b> Dept Of Geology  P.O. Box 8795  College of William & Mary Williamsburg, VA 23187 USA		<b>Office FAX</b> 757-221-2093 <b>Office Email</b> cmbail@wm.edu	
<b>Additional investigators or key field assistants (first name, last name, office phone, office email)</b> No co-investigators			
<b>Project Title (maximum 300 characters):</b> Structural Geology and Tectonic History of the Shenandoah National Park Region			
<b>Park-assigned Study or Activity #:</b> SHEN-00311	<b>Park-assigned Permit #:</b> SHEN-2005-SCI-0005	<b>Permit Start Date:</b> Mar 20, 2005	<b>Permit Expiration Date:</b> Mar 19, 2007
<b>Scientific Study Starting Date:</b> Mar 20, 2005		<b>Estimated Scientific Study Ending Date:</b> Mar 19, 2007	
<b>For either a Scientific Study or a Science Education Activity, the status is:</b>  Continuing		<b>For a Scientific Study that is completed, please check each of the following that applies:</b>  <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years  <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park  <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed	
<b>Activity Type:</b> Research			
<b>Subject/Discipline:</b> Geostructure / Tectonics			

### Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):

The purpose of this project is to better understand the structural geology, timing of geologic events, and overall tectonic history of the Blue Ridge and Great Valley Region in and near Shenandoah National Park. This study is collaborative research with the U.S. Geologic Survey's ongoing studies of the Appalachian Mountains.

### Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):

In 2007 we continued our geologic mapping efforts in the southern part of Shenandoah National Park. Presented the results of our work in the Browns Cove area at a Geological Society of America meeting and led a field review for personnel at the USGS and Virginia Division of Mineral Resources. We also produced a GoogleEarth module on Shenandoah National Park that is available for

downloading (<http://www.wm.edu/geology/virginia/ge.php>). Sample were collected for Ar/Ar geochronology in and around the southern part of the park.

**For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?**

Yes

**If “Yes”, identify where the specimens currently are stored:**

College of William & Mary and USGS, Reston

**Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):**

\$0

**Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):**

\$18000

**List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:**

**Paperwork Reduction Act Statement:** A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.